



FIGURE 15a

TGTTAAKMCACGAKMGWSAKNCCGAKGGTGGKGVAAVGTGACARAGCTNGMNAARANGAAGTATGACOWTGGCCCRAGATAGKAMDAGNEM 100

?? ? R ? ? ? P ? V ? ? ? D ? A ? ? K ? K Y D ? W A ? I ? ? K ?
? ? ? H ? ? ? ? R ? ? ? ? V T ? L ? K ? ? S M T ? G P R . ? ? S ?
V ? ? ? T ? ? ? ? ? G ? ? ? . Q S ? ? K ? E V . P V G ? D ? ? ? A ?
SAGKTRAMGRCGATGGNCCGCAAVCGABWGGIAHTBCGGNWDCAKNGTCCAAATKSAKNTCSAGGAACCCAGGGAMTGGCTCGCARCCCDTAGG 200

? ? ? G R W ? ? Q ? ? G ? ? G ? Q ? P N ? ? ? R N ? R ? G S O P ? G
? ? ? D D G P A ? R ? ? ? ? A ? ? V Q ? ? ? ? G T ? G ? A R ? P .
? . R T M ? ? P ? ? ? ? ? R ? ? ? S K ? ? S Q E P T ? W L A ? ? R
GATCAGGKACGATGRCCTCCGRNSKACTCSGNKTGRTWAATCGANWGTGGAGGCGGNGGAATRWAAAGTANTGGTMGAATATGNGVGGGAWATGA 300

I R ? D ? S P ? ? S ? . ? I ? ? R ? A ? E L ? S ? G R ? M ? R ? .
G S G T M ? ? R ? T ? ? D ? S ? V G R R R N ? K V ? V ? ? ? ? G ? D
D Q ? R ? L ? ? ? ? L ? ? ? I N R ? ? ? G G G I ? K ? W ? ? ? ? ? M
TRGTMGACTVIMVGGVAKVAKSGGTACAGGCGAKACARGRAKSTGTCTGAGGGAATCAGNAGGACAAAMTTGCCGAGTCCGGACTTAGATATGAT 400

? V D ? ? G ? ? ? Y R R ? Q ? ? V . G ? Q ? D ? ? A E V R T . ? ?
? ? T ? ? ? ? ? G T G E ? ? ? V S E E ? ? R T ? L P K S G L ? ? D
? ? R L ? R ? ? ? ? V Q A ? T ? ? C L R ? S ? G Q ? C R S ? D L ? ? I
ACGAANKTRGATCTTAMADGGGGGKASCGAGTGCSTAAACGVARATRGNSWGTCTACTTAAACNCCAGNGDGGACATTACTAGAGGAGGAGSTA 500

Y E ? ? I L ? G G ? R V ? K R ? ? ? ? L L ? ? Q ? ? T F T R ? G E .
T ? ? ? S ? ? G ? S E C ? N ? ? ? ? V Y ? N ? K ? G H L L ? E E S
R ? ? D L ? ? G ? A S A . T ? ? G ? S T ? T P ? ? D I Y . ? R R V
GCTAGATCAGCTGAGATGATCTAAKSTGGGCTCCCGTTCGACATATGAGGAGACTGGTTCGGCAGCATWATGCTCTTGTGACTCACATATTGTT 600

P D H ? R . S ? V G S R C Q Y M R G L V R Q T ? M L F A D S H I V
S Q I T . D D L ? W G P V A S I . E D W F G R H ? C S L L T H I L L
A R S ? E M I . ? G V P L P V Y E R T G S A D I D A L C . L T Y C
GCTVAGKATGATCAGATACGCTCTGWTGTCCTCATCATGATSTGRCGCTGATCTAATGAGATTGCGCTATGATGACACAGAGACTTGTCTAT 700

A ? ? M I R Y D L ? S L I M N ? ? R D A N E I R L . W N K R L ? L
P . ? . S D T I ? C P S S . ? ? A V M L M R F A Y D G T R D ? C Y
C ? E ? D Q I R S ? V P H H E ? ? P . C . . D S P M M E Q E T ? A T
AGCAGGCGATGAGGCTTTTAGAGTAGGAGTCTCAGGAGGAGGAACTGTGGACCTGGAGGACAGGGACTCCAGGAGGAACTWGGCAACTGSCCT 800

Q Q A N E G F . S R S L R R R E T V D L E D O G L O E E V A T T G L
S R R M K V S R V G V S G G E K L W T W R T R D S R R K ? P Q L A
A G E . R F L E . E S Q E E R N C G P G G P G T P G G S ? H N W L
GAGTTTCGGCTCCGATCTGATAGGCTCTGCTCTVGAATATCCCGCTCTCTGCTGGATGGCTCAGAAATGCTGGACCTTTTCACTCCCACTGGA 900

? F R L R S . Y ? L V L ? V I P L S C W M A Q K C L D L F I P T G
? S F G S D P D T G S S ? E L S P S L A G W L R N A W T F S S P L D
? V S A P I L I ? A R P ? S Y P P L L L D G S E M P G P F H P H W
CAACTAGGCGCTGCGGCTTGCGGCTGGGATGTGGGGCTGTGTGGGCTCATATCCTCCATCTGTCTATTCTCACCTAATCTGTCCCTGENTACGA 1000

Q T R R L A L W P W D C G A V W P H I L H S V Y S H P N L S L ? T
K L G V W R C G P G I V G L C G L I S S I L S I L T L I C P W ? R
T N . A S G V A L G L W G C V A S Y P P F C L F S P . S V P G Y D
CTCAGCCCTGACTGACATGTGGTACAGATAGGAGGAGGCCAGGTGGGTGAGATGGAAGCTGAGATGGTACTGTGTGCGGACCTCAITGTAAAT 1100

T Q A ? T D ? V V Q D K E G A Q V G E M E A E M V H C V P T S L . F
L K P ? L T ? W Y K I R R E P R W V R W K L R W ? T V C ? P H C N
S S P D . ? C G T R . G G S P G G . D G S . D G ? L C A ? L I V I
CACTNCCCTGACTGAGTGTAAATCCAGATCCCTAGGATGAGGAGGAGACCTGCCAAGACGGGTGAGGAGGAGCTGTAGGAGGAGGCTCCTGCA 1200

N ? L D . S . N P D P . G . G E E P A K D G S G R Q C . G K A P A
S T ? L T E V K I Q I ? R D E G K N L P K T G Q E G S A K G R L L Q
Q L P . L K L K S R S L G M R G R T C Q R R V R K A V L R E G S C

FIGURE 15b

GGCCTCTGCAGTTGGACTTCATTCAGTCCCATTCGCCAGATCTCATAGCTCTTCCCTTATCTCTCTGTCTTGAGTCTAGTTAAGAAATTTGTACCGGAG 1300

G L C S W T S F S P I A R I S . L F P L S L C L E S S . E F V T G
A S A V G L H S V P L P E S H S S S ? Y L S V L S L V K N L L P E
R P L Q L D F I Q S H C Q N L I A L P ? I S L S . V . L R I C Y R R
ACAGATTCTCTCTCTAGCCCTCTGGCCAGATATTAAAGAGAGGGGGTGGGTACTTTTGGTAGGGGAGCTAAGTATGGTAGCAAGTGCTA 1400

D R I L F L S L L A R Y L K G G G W V T F W . G K L K L W I A K C .
T E F S F L A S W P D I . K E G G G L L F G R G S L S Y G . Q S A
Q N S L S . P P G Q I F K R R G V G Y F L V G E A . V M D S K V L
ATGTATTCCTTTTTCTGAACCTCATGTAGCATTTTTCTCCCTCCACCTCCATACCTTCCAGGCTTCATTCATGCGCGGGCTCTCTCGCTCA 1500

LYSFFFLKPHVAFFFPSTLHTEFGFISCPASLRS
NCILPFLNLMHFSSLPPSILSQASFHARRLFAH
IVFFFSSETSCSIFLPFHPYPFPRLHFMPGVSSSL
CACCGCTGACGGTGTGTGAGCTTCTCCCCGGGTCTGCTTCAGACGCTGCTCCACATTCAGTTCTAGCTGTAAGATTCT 1600

H R C R L F E A S P L G L P Q Q T A S T L S S F C V H V D I R V S
T A A G C L R L L P W V C L S R L P P H F P V S A Y T L I L E F P
T P L Q A V . G F S P G S A S A D C L H T F Q F L R T R . Y . S F L
T C C C C T C T G G C T C T G C T T C T C T G A C T A C C A G G C T G A T G C A T G T C T G G C T C T C T G A A T A C T G T A C A A T G A T C T A T G A A T A C T G T 1700

F P T W L L L F L . L P R L M P C L A S S C K Y C T M I L C K . L V
S P L G S C S F S D Y P G . C H V W P L P V N T V Q . F Y V N N W
P H L A L A L S L T T Q A D A M S G L F L . I L Y N D S M . I T G
CCTTGCCCAAGAGCAGCAGCAGCCTTCTAGGCTACCAATTAAGATCAGTTTGTCTACTGACTTTTATTCATTCAAGATGCCGGGGGGTGGGGTG 1800

L A H R A S K P S R L T N . R S S L L T D F F I Q F K M A G G G V
S L P T E Q A S L L G . Q I K D O V C S L T F L F N S R W R G V G W
P C P Q S K Q A F . A N K L K I K F A H . L F Y S I Q D G G G W G

TACTG 1900

GGRIACFBCTGT . AGLKLL . APLLL . ASE . PTVSVT
GGGGLPVPTVVP RQG . SSELPCFRL LSSLQ . VLL
GGADCLFSLWYLGRAEALSSPALGF . VAYSECYC

V S S C S L T S G L S W S G H C K P . L S D C G W L S L A L A A N M
C P A A R . H L V S H G L V I V S L T V D G F P W R . Q L T
V Q L L V D I W S L M V W S L . A L A L . L W M A F L G V S S . H
2100

V T G F H . K F K C W G K G A D T P . W S Q F K T I R E T A S S .
W L Q D F T E N L N V G G K V R T H H N G P N S K Q S V K Q P Q V R
G Y R I S L K I . M L G E R C G H T I M V P I Q N N P . N S L K L
~~G Y R I S L K I . M L G E R C G H T I M V P I Q N N P .~~
TATTAGCACACACAAGCAT 2200

G . D V F N Q S N Y L D T T P K H T C L Q A V T P Q K L L D T Q Q A
G E M F S T K V I I L T P Q S T P V Y R Q . L P K S Y . T H N K H
G V R C F Q P K . L S . B H K A H L S T G S D S P K A I R H T T S M
G A T T T C T C T C T T T T A G T T C A C A G T A G C A G C C C T C A C A C A G T A G T A G G A A A T G T G C T G C A G T G T G C A G T G T T A T T T T G C A 2300

. P . L S G L A R S H S R T A L H T V G R K M L L S L L S A V I L H
 D H N S V D W Q G H T V G L P F T Q . V G K C C C H C C Q L L F C
 T I T Q W I G K V T Q . D C P S H S R . E N A A V T A V S C Y F A
 M R P S S T W T A G T T L N L A G C T L A A A A R T A T T G T C T C T A G C C T A C T T T C T G T C C R A C T G G A G G A A A R T A T T G A T A A A T A A C C S T G T A A A 2400

I P C . D . . G K K Y C L . V L L S V P N W R K L L N K . T V H K
I S H V K I N K A K N I V S K S Y F L F Q T G G N Y . I N K P C I K
V M V L R L I R O K I L S L S P T F C S K L E E I E . I N R A .

FIGURE 15c

AGTAGCCTCAGAAAGGGTCAAAATTGTGTTTTCTTTGAATATTAGCTGAGGCTCCAGGGGSCAGSCACCAAGGTAGAGAGCTGGACTAAGGCTGCTCTG 2500

SSLRKGNLCFL. ILAEASRGQHOGRELD. GCS
VASERVKICVFF EY. LRPPGGSTKVESWTKAAL
K. POKGSEKPVFSLNIS. GLQGAAPR. RAGLRLLC
TGTCTCTGCTGGGCTCCCCACAGCTCCCTTCCACCACTCCCATTCCTCAACTTTATTTTAGCTGCCAGTGGGAGGGGACAGTAGGAGGA 2600

VFLSWAPHSSLPPLPFPFHTLFLAASGRGQDRRE
CSCPGLPPTAPPFHHSLSIQLYF. LPVGGGRIGG
VPVVLGSPQLPSTTTPIPSNFI FSCQWEGAG. EG
AAGTAACGAAACAGCCAGGAGAGGACAGACCACTCAGAGCTCTGGACTGGACGGGACAGCGCCATGGAGTCTCTCTCCATCCCTCAGCTGCT 2700

SNENSQGGEGQSNSEPLGLDRTSAHGVSLHPSPA
KVTKTAKERDRATQSLSDWTGQAPMESLSIPHLL
K. RKQPRRGTEQLRASRTGPDKRPWSLSPSLTC
CTGCCCCCTGGGCTGCTGACAGGTGAGGAGAGCAACTTGGTTTCTGCTGGGATGGAAGTTATGTTGATTGTTATAATTGGGACCATTTATGGCTAAA 2800

PAPGVADR. GKQTFWFLLGMEVMMWIVYNWDHYG.
LPLA?LTGEGSKLGFCEWFKLCGLFIIGTIMAK
SCPWR? QVREANLVSAGNGSYVDCL. LGPLWLK
ATCTYGGGGGCTGAGGTGAGGTTAATACCGATGCTATATTCTGTGCTACTCATGTTCTTAGACACCAATGGCAGTGGCCAAACTTCTCTCT 2900

NLAGAQVGG. YRCYISCVHSCS. TPKWQWPKLPL
I?RALRSEVNTDAIFPVCTHVL RHPNGSQNFL
S?GRSGRLIPMLYFLCALMFLDQTQMAVAKTSS
GGCTTGACCTCTATCTAATACCTTGTACCTATTTATCTAABACCTTGGTCTAACTCCACAGCATGAGGSCACAGAAAGAGAGCTGTCTCTCAT 3000

ACTSLSKPLYLII. NLGPKLHRHEGTEKRRVSLH
WLVPHYLNLCT. LSKTLVLVNSTDMRAQKR DVS
GLYLIIT. TFVPNYLKPWS. TPQT. GHRKETCLS
CTTCATTCGGTTACCTGATTTCTACCTCCCTGCTTCTCCCTGCCATTGGTGTCTCTGGTGCTGAGGCTAATTCCTTACTATGTGGTCAGACT 3100

LPFGYTD SYLP CFSLP LVL LGA. GIALLCGQN
FHSVTLPPTFPASPCHWCSLVPEA. LPYYVVRT
SSI RLH. FLPSLLLPALGAPWCLRHNCCLTMVSEL
CTGGGTTGGCTACAGGACGAGTACAGTTTCTGCTCATAGCCCTGCCAATTTCTGGATTAAAAAAAAGGCTCAGTATATAATTCCTTTCTGA 3200

SGFA. RPSYSFWSHSPANFLD. KKKKAHI. NTFSE
LGSPNDRATVSGLIALLPISWIKKKRLTYKIFL
WVRLTTELQFLVS. PCQFP. GLKKKKS. HIKYLP.
AATGAGCAGCTGTGAGTTGAGTTGATTTTGGGGGATGGAGGTTGCTTGGTGCAGAGAGCAAGACASTAGAGAGAGATCATGGAGGGATAG 3300

NEHSVS. S. ILGDGGLLGCKEQDSREENHGRDK
KMSTV. VEVRFWGMEGCLDAKSKTVEKRI MGGR
K. AQCECLKLDFGGWRVAVWMQARQ. RRESWEG.
AGGCTGGATTTTCCCTGCTAGTCCCTATATCTTTGTTTCCCTAAATAACAGCTCTGATTTTATGGGATTCGGGTGAGGAGAAAGGATCAGTAGG 3400

RLEFFPASAL. SLFPKITALILWELGSGERNQ.
GWNFSLLVPYNLCFLK. QL. FYGNWGOEKGISR
EAGIFPC. CPIIFVS. NNSSDFMGIGVRRKESV
CAGAGTGGGACCCCAAGCTGGGACTAAGTTTGAGGAACTATGGGATGAGCAAGGGGTGTTGTAAAGTGGATGAGTGGAGGATTGTGGTGGGG 3500

AQMGPQAWTKV. GNYGSRQGVFVRWMR. GDCGGG
HRWDPKRGLKFEETMGVGKGCL. GG. DEEIVVG
TDGTPSVD. SLRKLWE. ARGVCKVDEMRRLLWG
GGATCTTGGGGGTATAGGACCTTAACAGGGATAGATGGCAACTGTGTGGGCAAGGCGGTGGTCCACCCACTTAATTAGCGTTGAGTTGGCAG 3600

ESWG. DP. QG. MANCVWAGRWFPPLN. R. GWQ
GSLGGDRFLNRDRWQTVCGQAGGSTHLSV EVGR
GVLGVIIGPLTGIDGKLCVGRPVVPPT. LALLRLA

FIGURE 15d

GGCTGGAGAGGAGCCAGTCTCTCACTTGGAGAAAGTGCAGTGTGACAAAGAAACAGAAAGAGGAGACATCCCGGGCAGGGAGCTCCTTGCCATCGT 3700

G W K E P A L S T L E K V Q V . Q E E T E R G D T R A G S S S L P S
A G R S Q H S Q P W R K C K C D K K K Q K E E T P G Q G A P C H R
G L E G A S T L N L G E S A S V T R R N R K R R H P G R E L L A I V
TTCTTCCCATGGCCCTGGCTTGGAGAGATTAGGAAAGGGTGGTGACTCTGCATCCTCAGAAAGCCCTCTCTCCCTTTTGGACTCTCGAGGCTTAGA 3800

F L P M A L L L G R I R K G W . L C I L R K A L S P S L D S R G L E
F F P W P W L W E E L G K G G D S A S S E K P S L P L W T L E A .
S S H G P G P G K N . E R V V T L H P Q K S P L S L F G L S R L R
GAGGAGATGTGTAGGAGGATGTGTGGAAGAGTAACCTTGACCTATCCAGATGTGTCTGTGATGAGATTTCAGGAATGAGATGGAATACAGCTGT 3900

R R M C R R N D V E R V T . P I Q M C L . M R F Q E . E W K Y S C
R G E C V G G M M W K E . L D L S R C V C E . D F R N E N G N T A V
E E N V . E E . C G K S N L T Y P D V S V N E I S G M R M E I Q L
GCTTCAGCATGGCCAGGGCTTAGGATCCCTCACCCCCACCCACAGGAAGAGATCATCCATCATCCACCTGGGGTCTGAGGACATGACATTGAC 4000

A S A W P R A L G S L T P T P Q E E N H P I I P P G V L R T . H .
L Q H G R G P . D P S P P P H R K R I I Q S S H L G F . G H D I D
C F S M A E G L R I P H P H P T G R E S S N H P T W G S E D M T L T
ACAGAGCAGGAGAGCTGAGATAGAACTCCCTCCTGTCTGTCTCCACTAAGCCTCACCAGTCCCTTCATTAACTGATGGTGGATGCTAATTATGAT 4100

H R A G E L R . K H S L L S C L V S L T S P S L T D W W M L I M I
T E Q E S . D R N T P S C L V S H . A S P V L H . L I G G C . L .
Q S R R A E I E T L P P V L S P T K P H Q S F I N . L V D A N Y D
CCTCACCCCTCAGGTCTCTGTCCCTTTTATCTGGATGACACACCCACAGTCTCTCACAGGGCCACAGAGGCGGAATTGGATACAGTGTCTTAC 4200

L T P Q V S A P P L I W M N T T H D S S Q G H Q R P N L D T V S Y
S S P L R S L L P L . S G . T P P T T L H R A T R G R I W I O C L T
P E P S G L C S P F N L D E H H P R L P T G P P E A E F G Y S V L
AGCATGTGGGGTGGACACGATGGTGGAGGGGAAACAGAGGCCGTGGGATCGGGACTATGCACTCACTGATAAGGGGAGGACCGGTCCAGCTGG 4300

S M L G V D S D G E R E N R G P W D R D Y A L T D K G E D R S K L
A C W G W T A M V R G K T E D R G I G T M H S L I K G R T G P S W
Q H V G G G Q R W . E G K Q T E T V G S G L C T H . . R E G P V Q A G
CCTTGAAGTGCCTGGGGCTCATGACGTCTCATGCACTCTCCCTCTCACTATACTAAGGACCATGCTCACGGATCTTTATATCATATTCTCCTTCC 4400

A F E S A W G S M T S H A L S L S L Y . G P C S P D L Y I H I L L P
P L K V P G A P . R L M H S P S H Y T K D H A H R I F I S I F S P
L . K C L G L H D V S C T L P L T I L R T M L T G S L Y P Y S P S
AGGATGCTGGTGGGTGCCCCCTGGGATGGCCATCAGGTGACCCGAGAGGGGATGTTTATCGTGTCTATAGGGGATTCACAGTGTCCATGTACCA 4500

G C W W V P P G M G H Q V T G E G M F I V A L . G D S T V L H V P
Q D A G G C P L G W A I R . P E R G C L S L L Y R G I P Q C S M Y Q
R M L V G A P W D G P S G D R R G D V Y R C S I E G G F H S A P C T
AAGGCCACTGGGTAGAGAGACCTGACCTTTCCCTGCTATTCTGTGATGTTGACATCTAGTAACCTGTGACCCCTTGGACCTTGTCTCAATGACCT 4600

K A T W V R R S L T F P L L I P D V D I . . L . P L G P C L Q . . P
R P P G . E E A . P F P C . F L M L T S S N S D P L D L V F N D P
K G H L G K E K P D L S P A N S . C . H L V T L T P W T L S S M T L
GRCTARAGAGCCGACTATGACCCCATGACTTCATTCTCTCTACCCCTCTCCACACAGGTGACTATCACTTGGAAATTCCTCTCAGCCTGCTGTG 4700

. T K E A E L . P H D F I L F Y P S S N Q V T I N L E I P L S L L .
E L K K P N Y D P M T S F S S T L P P T R . L S T W K F L S A C C
N . R S R T M T P . L H S L L P F L Q P G D Y Q L G N S S Q P A V
ARTATGCACCTAGGATGTCTACTAGAGACAGATGCTGTGGGGGTTTCATGGTGAAGTGAAGAGGGCTCAGAGGTTACAGAGGGAGAGAG 4800

I C T . G C L Y . R Q M L M G D S W . A E R R A S E G S Q G R E
E Y A P R D V S T R D R C . W G I H G E L K E G P Q K V H S R E E S
N M H L G M S L L E T D A D G G F M V S . K K G L R R F T A G K R

FIGURE 15e

CATTATGGTATCTGGGCAGTGGGGCTTGGGGCTTTCATCCAGTGTCTGGAGGCAGAGTCAGGGCTGATCTACAGAGTGAAGCTCCAGGACAGCCAAAG 4900

HYG I W A V V A W A F H P S V L E A E S G L I Y R V S S R T A K
I M V S G Q W W L G P F I P V F W R Q S Q A . S T E . A P G Q P R
A L W Y L G S G G L G L S S Q C S G G R V R P D L Q S E L Q D S Q G
CTATGAGAGAACCCCTGTTTGAAAAACCCAAACCAAACTAACCAACACACACGAAAAAGACCCGTGGTAGGGAARTTAGTCTGTATAGA 5000

A M Q R R N P V L K N P K P K L T K Q Q Q Q K K H R G K G N . S V . K
L C R E T L F . K T Q N Q N . P N N N N R K S T V V R E I S L Y R
Y A E K P C F E K P K T K T N Q T T T T T E K A P W . G K L V C I E
G A G A C A G G A T T C A A A C C C T A G A G A G G C A G G G T T C C C A T G G A G T G T C T C C A T C T C T T T T A A C T A G G T G T G T G T C C G A G A G G C C C T C T C A 5100

R Q G I Q N P R E Q G R V P H G V V S I S L L T R C V F R E A L S
R D K E F K T L E S K A G F P M E W S P S L F . L G V C S E R P S Q
E T R N S K P . R A R Q G S P W S G L H L S F N . V C V P R G P L
AGCCTGGGGATAACTATTCTCTATCTACCCAGGGCTGTGGCCCTCTTTGGCTCTGGTGGCTGGGAGCTGTGCTTCAGTTCTGGAATATGTGCCGCT 5200

S L G I T I S P I H P G L C P S L V S C L R Q L C L O F W N M C P
A W G . L F L L S T Q A C A P L W S R A C G S S V F S S G I C A R
X P G D N Y F S Y P P R P V P L F G L V P A A A L S S V L E Y V P V
GTGGATGCTTCATCCGGGCCCCAGGGAAGCCTTGGCACCCACGCCCCACGTGAGCCAGTGGAGGGGCCCCGGAAGCTCAGTCCCAAGTAGGGATGCTGG 5300

C G C F I P A P G K P G T H R P T . A S G R A L E A Q F P D R D A G
 V D A S F R P Q G S L A P T A Q R E P V E G P W K L S S Q I G M L
 W M L H S G P R E A W H P P P N V S Q W K G P G S S V P R . G C W
 GTGGCAAAACTAGGACAAAGACTTGGTGGAGGCTCTGCGATGGCTATCTCTCATCTTCCCAAGTGTGCTTGTCAGAGAGGCTCTGTGTTGCTACTGATT 5400

W E K L G Q R L G G G S A W L S S S F P S V L A E E A P V C . L I
G G K N . D K D L V E G L H G Y P H H S Q V C L Q K R L L F A N . L
V G K T R T K T W W R V C M A I L I I P K C A C R R G S C L L T D
AGATTGAGCTCTTAGGAGAGCTCAGAGCCCGAGGATCTGGTTTATCCAACTTAAABACAAACAAACAGCATATCTGTGCAAGCCTATCCCCC 5500

RIQTP.ESLKTPTGSGFTNLKTKQNSISCAQPIPE
 EFRLLRRASRHO DLVLPT.KQNKTAYPVHSLSL
 .NSDSLGEPODTRIWPYQLKNKTKQHILCTAYPS
 ATCCATCAGTCGTCCTCATCTCTTTTTTGTGGGCTTTATAGATGCCAATCAGCACTCAATTTATGGGTTCTCCCCCTATGCGCTTTTCATATACTTTC 5600

H P S R V L H I L F L W V L . M P S Q H S V I G F S P H A F H I L S
I H H V S S I S Y F C G S Y R C Q V S T Q L L G S P L M P F I Y F
S I T C P P Y L I F V G L I D A K S A L S Y W V L P S C L S Y T F
TTATCTACTGCTTTTGGGAGTAGCTTATGTAGCGCCAGGCTGTCTTGTCTTGGAAATTCCTTGCTCAGCTTCTCAGTCTCAAGTACTGGGATAAT 5700

Y L L P F G R . S Y V A Q A V L D L G I C L P Q L L S L K Y W D N
L I Y C L L G D S L M . P R L S L I L E F A C L S F S V S S T G I I
L S T A F W E I V L C S P G C P . S W N L L A S A S Q S Q V L G .
AGGAGCAATGCTGCGCTGCGCTTTGTGACATGCCCTCTGTGSSCATGTGATGGCATGAGTCAATATCTGCGCTCCCGGACACACACACACAAC 5800

R H A L S A W P L L N M P S V A I G R A . V K Y C P P P Q H T H K
G M H C L P G L C . T C P L W P L V G H E S N T A L P H N T H T N
. A C I V C L A F A E H A L C G H W . G M S Q I L P S P T T H T Q T
G A A G T G A G G C T C T C T A A G T G T C C A T A G G G T A G T G G T A G G C C T C G C T A G T G C A T A T T T C A T C T T T T A C T C G C C A T C T C T T C T T T G 5900

R K . G S L S V P . H R V V V G L S L V H I S F F Y S A H L F F L .
E S E A L . V F H S T G . W . A S R . C I F H S F T L P I S S F F
K V R L S K C S I A Q G S G R P L A S A Y F I L L L C P S L L S L
ATTTCACACTGGGGACCTGGCAGTACTTTCTGGTATTAGAGAGAAATCCCTTTTAAGTGCCTGCAATTGCACGCTCCTCCTGGGACATTCTCCCT 6000

F P H W G P G I V L S W . L R E N S L L S A C I A A S S W D I L P
D F H T G D L A . Y F P G N . E R I P F . V P A L Q R P P G T F S L
I S T L G T W H S T F L V I X R E P P F K C L H C S V L L G H S P

FIGURE 15f

TGCTGACTACACCCCATCCCTCCATGTTTTTTGTTTCCCATCACTATGCCCCCTTCTAGGCTGTCCACATACATGGATGTCGTTCATTGTTTTGGAT 6100

C . L H P T S F H V F C F P S L C P P S R L S H I H G C R H C F G
A D Y T P H P S M F F V S H H Y A P L L G C P T Y M D V V I V L D
L L T T P H I L P C F L F P I T M P P F . A V P H T W M S S L F W M
GGCTCCACAGTATCTATCCCTGGTCAGAGTTTCAGACTTTCCITCGGAGGCTGGTAGGAGACTGTTTCATCGATCCGGAGCAGATACAGGTAAAGAGAA 6200

W L Q Q Y L S L V R S S D F P S E A G R K T V H R S G A D T G K R K
G S N S I Y P W S E V Q T F L R R L V G R L F I D P E Q I Q V R E
A P T V S I P G Q K F R L S F G G W . E D C S S I R S R Y R . E K
GATATGGGATAGGATTGGAGGGAGAGTAACACTCCCTGGACCCCTGGATGTAAGCAGCCATGCCAGCCCTCTTGATGACCCCTGGGACATTGTCT 6300

I C G . D W R E R S K H S W T L G C K Q P C P A S . . H P G T L S
R Y V D R I G G K E V N T P G P L D V S S H V Q P L D D T L G H C L
D M W I G L E G K K . T L L D P W M . A A M S S L L M T P W D I V
TCTACAGAACTCATGCTCAGAACTGTGCAATTAACTTACCAAAAGTCAAAAATTTTCATATGTTTGAAGTAAGTTTATGATTGTGTGGGGGGCCAC 6400

S T E L M L R N C A I N L P K S H K N F I M F E V S L . L C G G P
L Q N S C S R T V Q L T Y Q K V T K I S . C L K . V Y D C V G G H
P Y R T H A Q E L C N . L T K K S Q K F H N V . S K F M I V W G A T
ACTCAGAGCTTCCCTTTGCTGCTTGTAGTTGCTTGGGCAATGCAATGATGAGCTGCAAGTATAGACACACTGTTCACTTCCCTTCATCTGCTGCTGAGG 6500

H S E L P F A A C S C L G N A C H E L Q V R H T C S L P L H R A A G
T Q S F P L L L V V A W A M H A M S C K L D T P V H F P F I V L Q
L R A S L C C L . L L G Q C M P . A A S . T H L F T S P S S C C R
TTGGACACACTGTAGGSGTTCCTTCCCTTCATCTTTTGCTGCTGCTTCTACGCTCTTCATACATCCATGTGGGACAGTGTATGTGTTCT 6600

W T H L L G V H F P F I L C A P S S L R S S Y I P C G H M V Y C S
V G H T C . G F T S P S S F V L H L L Y A L H T S H V G T W S I V L
L D T P V R G S L P L H P L C S I F S T L F I H P M W A H G L L F
CAGGTAGGACTGGTACAGTACGGGGAGAACCTGTGCTAGTGGTCCCTGGGAGCTTCCGACAAAGGAGAGTGTGTGAGGAGCAGGAGGACCTAA 6700

Q V G L V Q Y G E N P V H E W S L G D F R T K E E V V R A A R N L
R . D W Y S T G R T L C M S G P W E T S E Q R K K L . E Q Q G T .
S G R T G T V R G E P C A . V V P G R L P N K G R S C E S S K E P K
GTGCGAGGGAAGGGCGAGAACGAGAACCCGCAAGCGATCATGGTGGCATGCTGAGACATTGTAAAGGGGCTGTGTGAGGAGGAGGAGGATCAGAG 6800

S R R E G R E T R T A Q A I M V A W . D I V K G S C E G G G R I S R
V G G K G E K R E P P K R S W W H G E T L . R G R V R E E E G S A
S E G R A R N E N R P S D H G G M V R H C K G V V . G R R K D Q Q
GGAGAGGAGAGGGCTGTGAGGTAGTGTATACATACACAGATGCTTGGGCGCTTATCTTTATCTGCTGCCAGAGTTCCTGGAGGAGGCTAGGTTG 6900

E R E R V W S V V Y T S Q D A L G A Y L Y L H A R S S W R K A R L
G R G R G S G V . C I H H K M L W A L I F I C M P E V R G G R L G C
G E G E G L E C S V Y I T R C S G R L S L S A C Q K F V E E G . V
CTGTACCATACTCTCTTACTGATTTGCTTTTATGGTGTGTGGGGTATCTCTCTTGTCTGTTCTGTTCTGCAACAGACTCCATCTTTCC 7000

L S P Y S L L L Y L H F M V S V G V S L L V C S V S A H R T P S F
C H H T L S Y C I C I L W C L W V Y L S L S V L F L H T E L H L S
A V T I L S L T V F A F Y G V C G C I S P C L F C F C T Q N S I F P
TCTTACTCTCTGCTCAATCTGTATACCTAGCTTCTACCACTACGCGCTAGTATCTTTTCAACATGACTCTAAACCTCTGGGGAGGCTACATGA 7100

L P Y S C V N S D T . L L N H S R P S I L F K H D S K P L G R L H D
S S T P A S I L I P S F S T H A L V F F S N M T L N L W G G Y M
L L L L R Q F . Y L A S Q P L T P . Y S P Q T . L . T S G E A T .
CCTGACTGTCTTTATCTCCAGTTCCTGATCTTGTCAACCAAGTGTGCTGAATGAATCTATAAATAAATAATGCTGTACATATTACACTGATGA 7200

L T V F I L Q F L D L V N P S V C . M N L . I N N A C T Y L H . .
T . L S L F S S S L I L S T Q V F A E . I Y K . I M L V H I Y T D D
P D C L Y S P V P . S C Q P K C L L N E S I N K . C L Y I F T L M

FIGURE 15g

CAGATTATTTTATATGTTCCGTGCCATCTAAACAGTCAAGTTGTGACTCTGTGCCAGTTTGCTTGCTAGATACTGTTGGGGAATGGTGTAGAAGACATCT 7300

Q I I L Y V P C H L N S Q V V T L C Q F A C . I I L G N G V E D I
R L F Y M F R A I . T V K L L C A S L H A R Y C W G M V . K T S
T D Y P I C S V P S K Q S S C D S V P V C M L D T V G E W C R R H L
G A C T C A G T G A C T G C T G A C G T G T A T A C A T A C C G G G C T G C G T G C A T G C A A G C C T G T G T G T A T G T G C A T G C A T G C A C A C A T A C A T A T G A C C 7400

. P Q . T A D S V N T L Y G H A C M Q A C V Y V H A Y A H T Y I . P
 D L S E L L T V L I H Y T I G M P A C K P V C M C M H M H T H T Y D
 T S V N C . Q C . Y T I R A C L H A S L C V C A C I C T H I H M T
 ATTATGATTCTTTTATCTCTCTCTAGACAGAGGGGTTCAGTCAGTCCCGGGGGGGACGACAGAGGGCCCTAGGTCGTGGTASTGTGCACTGATG 7500

Y S I L L S L F L A Q K G S V S P G G D D Q R P L G C W . L S L M
H I A F F Y L S S . H R R V Q S V P G G T T R G R . A A G S C H . W
I . H S F I S L L S T T E G F S Q S R G R P E A A R L L V V T D
GAGAGCCCAATGATGAGAGACTTCAGCACGGCTAAAGGCTGTGAGGTGCGAGAGTGACACGTTATGGGATTGGGTGAGACTTGATCAAGTCC 7600

[illegible]

S C F V L C C I V C V C V C V C V C V C V Y V . Y V C M H Q C T
V V L F C V V S C V C V C V C V C V C V C M C D M C A C I S A
L F C F V L Y R V C V C V C V C V C V C V I C V H A S V H
ATACCTACTCTGTATCGGGTCAGAGACAACTCAGTGTGTGGTCTCACCCTCCATCTGTGTCCAACTGGATATCTGTTCACCTCGGCTATCA 7800

Y H S V Y M R V R E Q P Q M L V L T F H L V P N W I S C S L R H T
E T I V C I C G S E N N L R C W S S P S I L F Q T G Y L V H F G I Q
I P C V Y A G Q R T T S D V G P H L P S C S K L D I L F T S A Y
ATAGCGCATAGCTAGCCCAAGCTTTGGGAGGCTTCTGTCTAGGCTCTGTCTCTTGGTTTGGGCACTTCGGATTTCAGATAGGCTTGA 7900

I S Q I S . P T S L G Q V F C L S L L S L G L R H S G I Y R . A .
 . A R L L D P Q V L A G R S S V S A S C L L V . G I L E F T D K L D
 N K P D . L T H K S W A G I L S Q P P V S W F E A F W N L Q I S L I
 ATCGATTTCCTGCAGCCCGGGGCTCCACTAGTCTCAGAGCGGCCGCCACCAAGGGAG 7958

Y R I P A A R G I H . F . S G R H Q G S
I E F L Q P G G S T S S R A A A T K G
S N S C S P G D P L V L E R P P P R E